Bulletin #7119-G
DEPLW-100-A99-G

SAFE H2OME PROGRAM

FACT SHEET #6

LEAD IN THE ENVIRONMENT

Why Should I Be Concerned?

When you look around your home and think about all the risks to your health and to your children's health, few are as potentially harmful as lead. Lead can affect normal brain and body growth, cause hearing loss, affect liver, kidney and other organ functions, and cause many other problems. To make the situation worse, the damage is nearly irreversible.

Toddlers, infants and pregnant women are at the greatest risk. The reasons for this are simple: infants, toddlers, and developing fetuses absorb and retain more of the lead they take in. Adults retain about 10 percent of the total lead they absorb; children retain over 40 percent. Further, since they have such a small body size, a little bit of lead has a much greater impact on a child. If your child is constipated or tired, or has headaches, stomach cramps, poor appetite or sleep disorders, have him or her tested for lead poisoning.

Lead is found in many places in your home: paint, paint dust, normal household dust, solder, and some pipes. Your risk of lead poisoning depends greatly upon your exposure to lead from these sources.

What can you do to cut down on the risks of lead to you and your family? The information contained in this fact sheet will help you answer this question.

Lead Exposure on the Job

Some jobs will expose adults to lead. Automotive repair, construction work, painting, ship building, and some manufacturing jobs may expose workers to lead. Taking all necessary precautions, including wearing respirators and long-sleeved shirts and pants, and removing these clothes prior to coming home and playing with your children, can help reduce any problems.

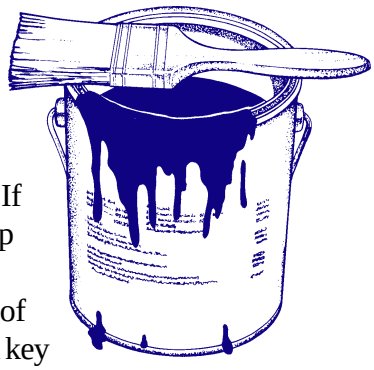
A joint water quality project from:

UNIVERSITY OF MAINE Cooperative Extension

DEPARTMENT OF ENVIRONMENTAL PROTECTION · STATE OF MAINE ·

Lead-based Paints

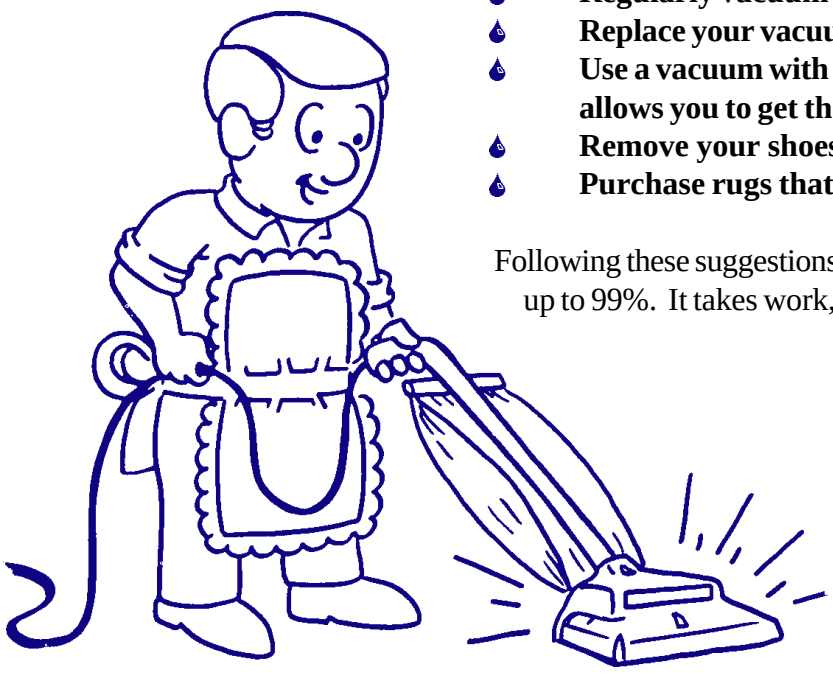
Most homes built prior to 1960 have lead paint. Leaded paints were the finest and most expensive paints in their day. They were used primarily on doors, door jams and window frames. As a result, when doors are slammed and windows opened and closed, dust is generated. Also, over time these paints chip and peel. Many new homeowners want to remove all leaded paint. Done properly, removal eliminates a large source of lead. On the other hand, if removed without proper precautions, exposure to highly toxic lead dust can be significant. If you decide to remove the paint, seal the room with plastic to keep dust in that room and wear a mask so you won't breath the dust. Wipe down and mop the room when finished. Keep children out of the house during the remodeling period. Minimizing exposure is a key to maintaining a safe lead-free environment.



Dusts

Dust blowing into your home may have highly toxic levels of lead. In a recent study in Seattle, the dust in and around 1950s era homes had lead concentrations between 500 and 1000 parts per million; *these concentrations are greater than the EPA's cleanup standards for Superfund sites!* Lead was in gasoline until 1982, and the exhaust from vehicles burning leaded fuel loaded many areas with large amounts of lead. Since lead tends to bind to soil particles, it can accumulate and be tracked into or blown into homes.

Consider these tips to reduce your exposure to dust-borne lead:

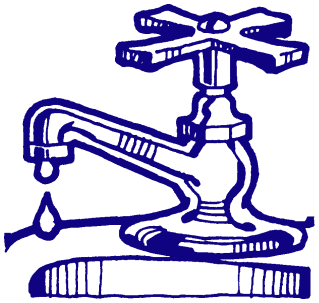


- **Regularly vacuum your home, at least once a week.**
- **Replace your vacuum bag regularly.**
- **Use a vacuum with an agitator or beater bar. This allows you to get that deep finely imbedded dust.**
- **Remove your shoes at the door.**
- **Purchase rugs that are easy to clean.**

Following these suggestions can reduce exposure to lead dust by up to 99%. It takes work, but the benefits are well worth it.

Lead in Drinking Water Supplies

Lead can be a problem in drinking water if your plumbing system uses lead-based solder or leaded pipes. Most lead pipes have been removed from water supply systems, and use of lead-based solder was outlawed for new construction after 1986. However, most of the solders sold in hardware stores for "do-it-yourselfers" still contain lead, as do most plumbing fixtures. This can pose a problem if water is allowed to remain in the pipes long enough to extract lead from the soldered joints or fixtures. So, the first glass of water or first formula made in the morning will likely contain the highest lead concentrations.



To obtain a water test for lead, you can call the Health and Environmental Testing Lab in Augusta (207) 287-2727 or another private testing lab listed in the phone book and request a first-draw lead test kit. A first-draw test is different from any other water test. The lab will tell you to not use the water for eight hours. Then, take a water sample from the first water that comes out of the tap. The results are then based on the worst-case scenario, and will tell you whether you need to be concerned about lead in your drinking water.

If you have a private well, there is another source of lead that you should be aware of. Submersible pumps with brass fittings can cause high lead levels in drinking water. The leaching of lead from brass fittings is highest from new pumps in soft water. If your well water is soft or if you have recently put in a new pump, you should have your water tested for lead.

If your water comes from a public supply, you should still think about lead in your water. The U.S. Environmental Protection Agency requires public water suppliers to test the water in homes for lead. If enough homes test high in lead, public water suppliers are required to treat the water. For more information about lead in water supplies, order Water Quality Bulletin #7088 from the University of Maine Cooperative Extension.

Other Sources of Lead in the Environment

Other sources to consider include varnishes, pottery and foreign canned food. As a group, toddlers are at the greatest risk for lead poisoning. They will chew and gnaw on many things. Paints and some varnishes may contain lead. Hardware stores sell kits that will check the lead content of paint and varnish used on cribs or highchairs, pottery glazes and other household items.

What Else Can I Do?

Diet can help curb the impact of lead on children's development. A diet rich in iron and calcium will minimize lead build-up in the body. Have children screened annually or biennially for lead by a doctor. A check-up can stop a problem before a child's health is significantly affected.

Lead Worksheet

This worksheet will help you assess if you or your children are at risk from lead poisoning. A low risk means you are unlikely to suffer from lead contamination. If you have a score of three or higher in a category, consider what you can do to reduce your risk. Contact an organization listed on the reference page if you need help. Choose the answer that best describes your situation.

Category	High Risk (4)	Moderate-High Risk (3)	Low-Moderate Risk (2)	Low Risk (1)	Your Rank
Risk Groups	Toddler and/or infant	Pregnant woman	Child over 5 years	No children	
Home Age	Greater than (>) 80 years	40 - 80 years	20 - 40 years	Less than (<) 10 years	
Remodeling	Yes, leaded paint, no precautions taken	Yes, leaded paint but precautions taken	Yes, no leaded paint	No plans to remodel	
Pottery	All foreign pottery, not checked for lead	All domestic pottery, not checked for lead	Some leaded pottery, rarely used	No leaded pottery	
House Dust	Vacuum infrequently (no agitation bar), shoes not removed	Vacuum occasionally, do not remove shoes at door	Vacuum often, do not remove shoes at door	Vacuum often (agitation bar in vacuum), shoes removed at door	
Occupation	High exposure, no precautions taken	High exposure, precautions taken	Some exposure, precautions taken	No lead exposure	
Plumbing	Lead pipes and leaded solder	Copper pipes with lead solder	Copper pipes with no lead solder	New plumbing with PVC pipes	
Well Pump	Brass fittings, pump < 4 years old	Brass fittings, pump 4 to 10 years old	Brass fittings, pump > 10 years old	No brass fittings	
Water	Soft water, pH < 7.0, hardness < 60 parts per million (ppm)	Moderately hard water, pH < 7.0, hardness > 60 ppm	Moderately hard water, pH > 7.0 - hardness > 60 ppm	Hard water, pH > 7.0, hardness > 120 mg/L	
Water Test	Not tested, lead possible (new well pump - lead solder)	Not tested, lead unlikely (PVC pipes, no lead solder)	Tested, some lead but below standard	Tested, no lead found	

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